

**AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claims 1- 29 (canceled)

Claim 30 (Currently Amended): An apparatus for the spectral selection and detection of spectral regions of a light beam, the apparatus comprising:

a first selection unit including[[:]] a first spectral splitting device configured to spectrally split the light beam; and

a first ~~light blocking and reflecting~~ deflecting device configured to deflect a portion of the spectrally split light beam so as to provide a deflected first spectral region and an undeflected second spectral region ~~block a first spectral region and reflect at least part of an unblocked second spectral region~~; and

a first detection unit including a plurality of first detectors, at least a first one of the first detectors being disposed in a first beam path of the ~~blocked~~ first second-spectral region, at least a second one of the first detectors being disposed in a second beam path of the ~~reflected~~ first spectral region, each of the first and second first detectors having a respective different detection property or using a respective different detection method, and each of the first and second first detectors including at least one of:

- a photomultiplier configured to detect fluorescence,
- an arrangement of photodiodes configured for making quick measurements, and
- an arrangement of avalanche photodiodes configured for detecting weak signals.

Claim 31 (Currently Amended): The apparatus as recited in claim 30 further comprising:

a second ~~light blocking and reflecting~~ deflecting device configured to ~~block~~ deflect a third spectral region of the ~~reflected~~ first spectral region or the ~~unblocked~~ second spectral region;

~~and to reflect an unblocked fourth spectral region of the reflected first spectral region or the unblocked second spectral region; and~~

a second detection unit including a plurality of second detectors, at least one of the second detectors being disposed in a third beam path of the ~~blocked~~ third spectral region, at least one of the second detectors being disposed in a fourth beam path of the second reflected fourth spectral region, each of the second detectors having a respective different detection property or using a respective different detection method.

Claim 32 (Currently Amended): The apparatus as recited in claim 31 wherein the second ~~light blocking and reflecting~~ deflecting device and the second detection unit are disposed in a cascaded arrangement with the first ~~light blocking and reflecting~~ deflecting device and the first detection unit.

Claim 33 (Currently Amended): The apparatus as recited in claim 30 wherein the plurality of first detectors includes at least three detectors, and the first light deflecting ~~blocking and reflecting~~ device is configured to at least one of block or reflect at least a respective spectral region to each of the at least three detectors.

Claim 34 (Currently Amended): The apparatus as recited in claim 30 wherein the first ~~light blocking and reflecting~~ deflecting device is configured to divide an entire spectrum into a plurality of predefinable fractions.

Claim 35 (Currently Amended) : The apparatus as recited in claim 30 wherein the first ~~light blocking and reflecting~~ deflecting device is configured to provide a neutral spectral division.

Claim 36 (Currently Amended) : The apparatus as recited in claim 30 wherein the first ~~light blocking and reflecting~~ deflecting device is configured to provide a polarization-dependent division.



Claim 47 (Currently Amended): The apparatus as recited in claim 31 further comprising an optical device configured to adapt an image and disposed between the first ~~light blocking and reflecting deflecting~~ device and the second ~~light blocking and reflecting deflecting~~ device.

Claim 48 (Currently Amended): The apparatus as recited in claim 47 the optical device is configured to image split focus lines into the second ~~light blocking and reflecting deflecting~~ device.

Claim 49 (Previously Presented): The apparatus as recited in claim 47 the optical device includes a lens.

Claim 50 (Previously Presented): The apparatus as recited in claim 30 further comprising an optical device disposed in front of at least one of the first detectors and configured to reverse the spectral splitting.

Claim 51 (Previously Presented): The apparatus as recited in claim 50 wherein the optical device includes a prism.

Claim 52 (Previously Presented): The apparatus as recited in claim 30 further comprising a shutter disposed in the first or second beam path in front of at least one of the first detectors configured to open for a detection.

Claim 53 (Previously Presented): The apparatus as recited in claim 52 wherein the shutter is configured to close automatically as a function of an amount of light striking the at least one of the first detectors during the detection.

Claim 54 (Previously Presented): The apparatus as recited in claim 30 wherein the first detectors are configured to be cooled.



of the first detectors being disposed in a second beam path of the ~~reflected~~ first spectral region, each of the first detectors having a respective different detection property or using a respective different detection method.